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Perceptions towards wellness and life quality through body percussion - BAPNE Method and cognitive stimulation in elderly people

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Abstract

Cognitive decline produced by the passage of time is an aspect that the most part of society has resigned to happen, and many times we have not taken care of needs that this group could demand. Hence, through this research we propose an alternative based on life-long education for the improvement of life quality and wellness of this part of society, which is increasing due to population ageing that is currently taking place in Spain. The purpose of the research is to obtain the motor, state of mind, physical state and social state perceptions of the participants in program based on cognitive stimulation through music, body movement and teaching of body percussion – BAPNE Method which took place during the academic year 2013-2014 at the University of Alicante. The activities combine rhythm, melody, language and body movement to have a complete stimulation of all brain lobes, based on Howard Gardner's Theory of Multiple Intelligences, and the work of the different biomechanical planes (sagittal, frontal and horizontal). The methodology's working procedure allows a spacial layout of participants where teamwork is encouraged. This is carried out thanks to the group's distribution in pairs or concentric circles. The method for the analysed data processing within the qualitative paradigm has been accomplished through semi-structured interviews to the program's participants, and questions have been validated by experts.

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Keywords: body percussion; BAPNE; movement; cognitive stimulation; life quality; wellness; perceptions

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1. Introduction

The population ageing phenomenonis more and more present in our society. This is the reason why society is asking for more measures in order to achieve the appropriate attention for this population sector. Moreover, the presence of neurodegenerative diseases and others that affect the mood and the wellness of society is becoming increasingly evident, not taking care in many occasions of the needs these diseases may require. Wellness and life quality of the elderly cannot just be enjoying a good health or treating their needs with pharmacological treatments. Music, dance and movement are alternatives than can help this population sector by means of different programs. These ones are the cognitive improvement and stimulation, the coordination and motility development, as well as the promotion of physical health habits and social skills.

Through therapies with music as its central axis, significant improvements have been found at a motor and emotional level in patients with a movement disorder as the Parkinson disease (Pacchetti et al., 2000), and in patients with a mood disorder or a depression (Maratos, Gold, Wang & Crawford, 2008).

Furthermore, music is a very useful resource for the development and stimulation of the different kinds of cares thanks to organised activities through movement and dance. With the double task and the stimulation of the divided attention between the latter activities, these exercises are beneficial for these patients in order to stimulate their executive functions and reduce their risk of suffering falls and accidents (Bigand, McAdams &Forêt, 2000; Trombetti et al., 2011; Cao, Lacruz&Pais, 2011; Lussier, Gagnon y Bherer, 2012; Muir et al., 2012). Other studies also reveal the importance of benefits that dance and movement can provide to mental health. By means of these kinds of activities, individuals can socialise, express themselves and communicate with others (Padilla-Moledo&Coterón-López, 2013). Therapies based on these kinds of dynamics favour the mood besides helping the individual's life quality.

Body percussion also provides benefits either at a cognitive level or at a psychological one that condition the elderly wellness. Studies carried out through Body Percussion Didactics - BAPNE Method - have obtained favourable results with different kinds of individuals. These results disclose the benefits that this resource can provide with therapies set aside for different kinds of disorders, diseases or learning problems (Romero-Naranjo, 2012a; 2012b; Romero-Naranjo& Romero-Naranjo, 2013; Crespo-Colomino& Romero-Naranjo, 2014).

In previous studies through the cognitive stimulation program in elderly people, clinical and psychological results have been satisfactorily obtained, in which significant improvements have been observed by body percussion as a resource for the cognitive stimulation (Romero-Naranjo, 2014). Following the same dynamic and the activity program carried out throughout sessions, two goals have been determined for this research. With those goals we want to establish in a complementary way from the previous study the benefits that the patient perceives after carrying out the activities:

(A) To determine if the music and movement program for the elderly helps improve either cognitive or motor aspects.

(B) To know the effects over the mood, and the social and physical state of the patients who attend the music and movement workshop.

1.1 Cognitive stimulation program through BAPNE method.

The sessions carried out with the elderly last an hour, aiming to improve the attention, memory and coordination ability of the individual with body percussion as a therapeutic resource. The exercises are never over three minutes and are organised in different ways so that the participant does not feel that the activity is monotonous or routine-like. The position is never hierarchical or a facing one, but circular or in the form of a concentric circle so that all participants can see each other and no hierarchies exist among them. Besides, working in pairs is important because it favours the contact with other people. With this work typology the activity is expected to have a pleasant character, and that benefits the segregation of hormones, as the oxytocin, that produce feelings of pleasure and happiness for those who take part in it.

Through rhythm, melody, language and body movement the activation of the different brain lobes manage to obtain a complete cognitive stimulation based on the Theory of Multiple Intelligences by Howard Gardner (1983). The designed activities have this goal in mind besides working with the different biomechanical planes (horizontal,

sagittal and frontal). Therefore, the movements carried out cannot be made randomly as the goal must be specifically designed knowing which one is the aspect that is wanted to be worked out. Thus stated, the exercises are more simple and easier at the beginning, since just one biomechanical plane is used. Nevertheless, as the program progresses these resources will increase, whichsupplies a bigger complexity to the activities (Romero-Naranjo, 2011).

2. Method

2.1 Context and participants description

The research procedure has been carried during nine months in the Education Faculty of the University of Alicante (Spain) throughout the 2013-2014 academic course. The sample is composed by 20 retired people, 8 men and 12 women, with an age range between 61 to 80 years. They also have a medium-high socioeconomic level and a majority of them come from the Permanent University of the University of Alicante (UPUA), or they have heard about these courses through friends or acquaintances that attend them. To select our sample, different attention, concentration and memory tests were carried out, as well as physical ones, for it to be as homogenous as possible and for the participants not to have many problems at a physical and neurological level according to the cognitive deficit. Furthermore, all participants were informed about the compliance of ethical standards and the preservation of the anonymity and confidentiality of the latter.

2.2 Data gathering tool

The method used to obtain the analysed data within a qualitative paradigm has been made through semi-structured interviews. The issues of these interviews have been determining to obtain the required information in relation with the research goals (Munarriz, 1992). It is important to have a correct organization and planning of the prepared questions by the interviewer, in such a way that the participant's discussion does not stray from the main goals and issues of the research.

2.3 Data gathering procedure

Each interview was voluntarily settled on with the participants and was carried out in flexible timetables, so that they did not impose any difficulty to them. Once all the audio recordings of the gathered data werecarried out during the interview, the data was transcribed in order to be analysed and encoded.

2.4 Research questions

The questions carried out in the interviews were structured according to the prepared research issues within the goals set for the study. The issues for the first research goal (A) are related to cognitive, motor and memory aspects:

(A1) What is the perception of the sample of participants on whether practicing music and movement activities helps them to improve their memory and concentration abilities, and whether it is also translatable to their daily lives.

(A2) What is the perception of the sample of participants on whether practicing music and movement activities helps them to improve their motor and cognitive abilities, and whether it is also translatable to their daily lives.

The issues related to the second goal (B) constitute a range of characteristics related to social life, the mood and the physical activity:

(B1) What is the perception of the sample of participants on whether practicing designed activities to interact with others helps them to improve their mood and their socialising with other people.

(B2) What is the perception of the sample of participants on whether attending a music and movement workshop is experimented as inspiring to deal with sedentary lifestyle and to favour physical activity.

3. Results

3.1 (A1) Cognitive abilities

A1.1 Prevention/Help
'It's one of the many helps that I've always looked for myself as I want to keep my memory active.'
A1.2 Concentration/Attention
'I've noticed that I pay more attention, that my attention is more developed.'
A1.3 Memory
'I have more memory and more retention ability. Sometimes I have forgotten the shopping list and once at home I've realized I had remembered everything without the list.'
A1.4 Efficiency/Agility in information processing
'I'm more aware of everything, I see them coming sooner. I process more quickly.'

3.2 (A2) Motor abilities

A2.1 Coordination
'Yes, especially in coordination. I think that combining singing, dancing and movement of a leg and an arm has made myself improve.'
A2.2 Agility
'These activities also help to be more agile. At this age they are necessary because if we don't move we get weakened.'
A2.3 Certainty/Confidence
'It has helped me to feel more confident when moving. I normally use a crutch but I hardly use it lately. I feel more confident.'
A2.4 Motility/mobility
'I find myself more agile […] I notice I have more equilibrium if I hop on one leg and I have a bigger control over my body.'

3.3 *(B1) Mood and social state*

B1.1 Evasion
'It helps me to escape from problems I have at home.'
B1.2 Happiness/Joy/Eagerness
'I am on cloud nine when I leave […] with a high self-esteem and a happier spirit.'
B1.3 Motivation/Self-improvement
'The activities are very pleasant. Maybe any of them is difficult but it's also a challenge to self-improve.'
B1.4 Fun
'We come and we have fun. It's something you feel you need.'
B1.5 Create a social circle
'It has helped me to make friends, relate to people and open up to them.'
B1.6 Shyness overcoming
'It has been hard for me to relate to people. To start talking to someone I don't know is a horrible challenge, but now I don't find it that hard.'
B1.7 Communication
'The contact with others is important. You can interact with others while talking, greeting, knowing them…'

3.4 (B2) Physical benefits

B2.1 Vitality
'That pinch of movement and vitality provide us great benefits.'
B2.2 Wellness

'I come because I feel good. You change the rhythm of what you normally do and I think it's going to be good in the long run.'

B2.3 Relaxation/Tranquillity

'I leave very relaxed.'

Table 1. Codes and frequencies

(A1)	Frequency	(B1)	Frequency
A1.1 Prevention	8	B1.1 Evasion	5
A1.2 Concentration/Attention	12	B1.2 Happiness/Joy/Eagerness	7
A1.3 Memory	8	B1.3 Motivation/Self-improvement	9
A1.4 Efficiency/Agility in information processing	11	B1.4 Fun	3
(A2)		B1.5 Openness	14
A2.1 Coordination	9	B1.6 Shyness overcoming	3
A2.2 Agility	4	B1.7 Communication	15
A2.3 Certainty/Confidence	4	(B2)	
A2.4 Motility/Mobility	8	B2.1 Vitality	8
		B2.2 Wellness	10
		B2.3 Relaxation/Tranquility	5

4. Discussion and conclusions

The perceptions and opinions of the participants of the program carried out with elderly people throughout all these months show highly significant results. In the light of the obtained data, the participants reveal significant improvements in tasks that require a cognitive effort, either in aspects as memorization and efficiency in information processing, or as maintenance of concentration and attention. Moreover, they reflect a high concern about carrying out activities that help them keep their cognitive faculties, and about looking for options that serve to put a stop to neurodegenerative problems.

Regarding the improvement of motor aspects, they recognise improvements in the body coordination, which provides them a bigger mobility and movements with ease, either in specified tasks and exercises carried out in the program or in tasks carried out everyday.

Even if one of the main purposes of the program and the BAPNE method is the cognitive stimulation and the activation of the different brain lobes, carrying out these kinds of activities also favours social aspects, especially the interpersonal intelligence. A high number of participants assure that having met new people and carried out these kinds of courses has helped them socialise with more people and communicate with others. Thanks to the position of the group in the activities and to the active dynamic, those who take part in them improve their mood, so that these aspects are considered to be important as they help them in their wellness and relaxation.

In spite of the gradual increasing difficulty of the activities, it does not suppose a stress factor for them, but it encourages and stimulates them to overcome new challenges and defiances. This provides them with a feeling that helps them become more active, continue learning and encouraging themselves to carry out new activities, so that they avoid falling into the routine and leading a sedentary and inactive lifestyle.

This program allows rewarding experiences for this population sector, whose benefits not only meet cognitive goals, but they also allow dynamics of cooperation and dynamism for those who take part in it. Personal wellness is not just focused on an optimal physical state, but it influences other mental and psychological factors that are worked in these kinds of proposals.

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